



Genset

Model	JHP5-2000GF
Voltage	230/400V
Frequency&Speed	50HZ;1500RPM
Prime Power	2000kW/2500kVA
Standby Power	2170kW/2713kVA

Basic technical data

Number of cylinders	16
Cylinder arrangement	60° Vee
Cycle	4 stroke
Induction system	Turbocharged
Combustion system	Direct injection
Compression ratio	13:1 nominal
Bore	160 mm
Stroke	190 mm
Cubic capacity	61.123 litres
Direction of rotation	Anticlockwise viewed on flywheel
Firing order	1 ^A , 1 ^B , 3 ^A , 3 ^B , 7 ^A , 7 ^B , 5 ^A , 5 ^B , 8 ^A , 8 ^B , 6 ^A , 6 ^B , 2 ^A , 2 ^B , 4 ^A , 4 ^B
Cylinder 1	Furthest from flywheel

Note: Cylinders designated 'A' are on the right hand side of the engine when viewed from the flywheel end

Weight of Electropak

Temperate

Dry	7783 kg
Wet	8381 kg

Tropical

Dry	8203 kg
Wet	8861 kg

Overall dimensions of Electropak

Temperate

Length	4542 mm
Width	2185 mm
Height	3175 mm

Tropical

Length	4562 mm
Width	2185 mm
Height	3736 mm

Energy balance

4016-61TRG3X

Designation	Units	1500 rpm		
		Baseload power	Prime power	
Energy in fuel	kWt	4951	5458	
Energy in power output (gross)	kVib	1975	2183	
Energy to cooling fan	kVim		100	
Energy in power output (nett)	kVim	1875	2083	
Energy to exhaust	kWt	1400	1535	
Energy to coolant and oil	kWt	757	830	
Energy to radiation	kWt	135	160	
Energy to charge coolers	kWt	684	750	

Note: Not to be used for combined heat and power (CHP) purposes (indicative figures only). If necessary, consult Perkins Engines Company Ltd.

➤ **Engine: Perkins 4016-61TRG3X**

➤ **Alternator: Stamford/Leroy Somer**
/Hengsheng

➤ **Controller: DeepSea/SmartGen**
/DEIF/ComAp

Moment of inertia

Engine	10.89 kgm ²
Flywheel	9.55 kgm ²

Total engine inertia

Engine and flywheel	20.44 kgm ²
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Cyclic irregularity, engine/flywheel standby power

1500 rpm	1.204
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Ratings

Steady state speed stability at constant load ± 0.25%
Electrical ratings are based on average alternator efficiency and are for guidance only (0.8 power factor being used).

Operating point

Engine speed	1500 rpm
Static injection timing	See engine number plate
Cooling water exit temperature	< 98°C

Fuel data

To conform to BS2869 class A2 or BS EN590.

Performance

Sound pressure level 1500 rpm	119 dB(A)
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Note: All data based on operation to ISO 3046/1, BS 5514 and DIN 6271 standard reference conditions.

Note: For engines operating in ambient conditions other than the standard reference conditions stated below a suitable de-rate must be applied.

Note: De-rate tables for increased ambient temperature and/or altitude are available, please contact Perkins Applications Department.

Test conditions

Air temperature	25°C
Barometric pressure	100 kPa
Relative humidity	30%
Air inlet restriction at maximum power (nominal)	2.5 kPa
Exhaust back pressure at maximum power (nominal)	3 kPa
Fuel temperature (inlet pump)	58°C maximum

Lubrication system

Total system capacity

Maximum sump capacity	213 litres
Minimum sump capacity	157 litres
Oil temperature at normal operating conditions.....	95°C
Oil temperature (in rail) - Maximum continuous operations.....	105°C

Lubricating oil pressure

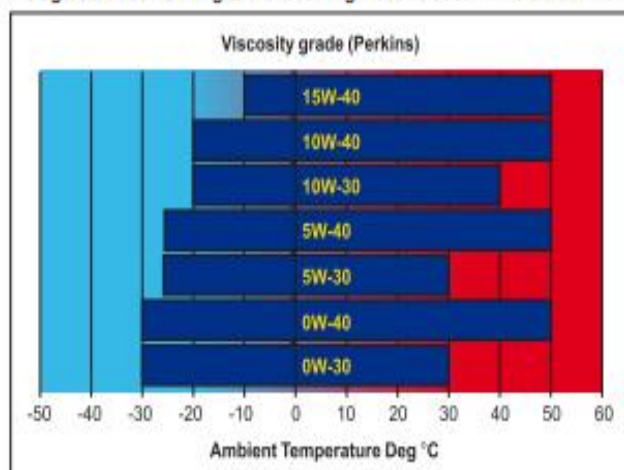
At rated speed	400 kPa
Minimum @ 80°C	340 kPa
Oil filter screen spacing	40 microns
Sump drain plug tapping size	G1
Oil Pump speed and method of drive	1.4 x e rpm, engine driven
Shutdown switch - pressure setting.....	193 kPa (falling)

Oil consumption

Prime power	Units	1500 rpm
After running in (typically after 250 hours)	g/kWhr	0.52
Oil flow rate from pump	litres/sec	6.7

Recommended SAE viscosity

Multigrade oil conforming to the following must be used API CG 15W/40.



Note: For additional notes on lubricating oil specifications, refer to the OMM manual.

Alternator

Pole No.	4-Pole
Exciter Type	Single bearing, Brushless, Self-excited
Power factor	0.8
Voltage range	adjust $\pm 5\%$
Insulation Grade	H
Protection Grade	IP23/22
Phase / wire	3 phase 4 wires

Fuel consumption

4016-41TRG3X, Temperate and Tropical		
Rating	g/kWh	litres/hr
Prime	209	529
Baseload	205	520
75% prime	200	349
50% prime	204	246
25% prime	220	145

Note: All based on assumed density of 0.862.

Note: All figures in the tables above are based on gross mechanical output, for fuel consumption based on electrical output of the generating set contact your OEM.

Exhaust system

Exhaust outlet size (internal).....	2 x 254 mm
Exhaust outlet flange size	10 inch table D
Back pressure for total system.....	4 kPa

Electrical system

Alternator type.....	Insulated return
Alternator voltage.....	24 volts
Alternator output	55 amps
Starter motor type	2 x 24 Volt Electric
Starter motor power	16.4 kW
Number of teeth on flywheel	156
Number of teeth on starter pinion.....	12
Minimum cranking speed (0°C)	120 rpm
Starter solenoid pull-in current @ -25°C maximum	30 amps
Starter solenoid hold-in current @ -25°C maximum	9 amps
Engine stop solenoid.....	24 volts
Hold-in current of stop solenoid	1.1 amps

Engine mounting

Maximum static bending moment at rear face of block.....	1356 Nm
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- ✧ NEMAMG1.JIANGHAO, and ANSI standards compliance for temperature rise and motor starting.
- ✧ Sustained short-circuit current of up to 300% of the rated current for up to 10 seconds.
- ✧ Sustained short-circuit current enabling down stream circuit breakers to trip without collapsing the generator field.
- ✧ Self-ventilated and drip-proof construction.
- ✧ Superior voltage waveform from two-thirds pitch windings and skewed stator.
- ✧ Digital solid-state volts-per-hertz voltage regulator with +1% no-load to full-load regulation.

Control Panel



The control module gives digital readouts of:

Generator voltage;
Output frequency;
Engine speed;
Battery voltage;
Engine hours run.

The **control panel** is an Digital Control Module suitable for a wide variety of single, diesel or gas, gen-set applications.

Monitoring an extensive number of engine parameters, the module will display warnings, shutdown and engine status information on the back-lit LCD screen and illuminated LEDs.

The control module has indicators for failure information:

Over speed/Low speed,
Emergency stop
Low oil pressure;
High water temperature
Failure to start
Battery charger failure



Dimension:7000*2720*3000mm

Weight:14000kg

Fuel Tank Capacity:1000-3000L

No silent type

Automatic shutdown occurs under:

Low engine oil pressure;
High engine water temperature;
Over speed/Low speed;
Failure to start after three attempts.

Electrical system

- Maintenance-free and anti-explosion battery
- Standard breaker
- ABB breaker (optional)
- ATS (optional)
- Battery charger (optional)
- GMS monitoring (optional)

Packing

- Wrapping film packaging
- Tray packaging
- plywood box packaging

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